

C.N. Beam

BRIEF PASSENGER CAR DATA

—1956—



ETHYL CORPORATION



BRIEF PASSENGER CAR DATA

1956

ETHYL CORPORATION
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NOTICE

The specifications and adjustments contained in this booklet have been compiled by the Research Laboratories of the Ethyl Corporation from information supplied by manufacturers of motor cars, ignition apparatus, spark plugs, etc. None of this information represents the results of tests at the Research Laboratories of the Ethyl Corporation.

This information covers the essential characteristics, in ready reference form, of the 1956 passenger car models. It is correct at date of publication, but changes may be made from time to time by motor car manufacturers.

Data on horsepower, torque, bmep, etc., are that given by the manufacturer. Methods and technique of testing differ in various engineering departments, so these data are frequently not comparable for different makes of cars.

GENERAL NOTES

Spark Plugs

The spark plug installed and recommended by the factory is shown first in the specifications with the corresponding AC, Auto-Lite or Champion spark plug shown as an alternate. These plugs are designed for average driving conditions. For heavy duty or high speed driving, it may be necessary to use a colder plug in order to obtain satisfactory spark plug life. The necessity for a colder plug is indicated by rapid electrode wear and, in extreme cases, splitting and cracking away of the insulator.

It is sometimes necessary to change to a plug which is hotter than the factory equipment plug for very light service, especially in metropolitan areas. If an engine is not pumping oil and the ignition system is in good condition but the spark plug consistently fouls — the need for a hotter plug is indicated. Caution should be exercised in using hotter than standard plugs as they are likely to cause preignition if the vehicle is subjected to high speed driving.

Periodic cleaning of spark plugs by means of an efficient spark plug cleaner is often advantageous.

Spark plug gaps should be set and maintained at factory setting. Pitted breaker points should be cleaned and, if badly pitted, replaced. Incorrectly set breaker points will affect ignition timing and ignition output.

Ignition Timing

Ignition timing is given in crankshaft degrees and is factory setting. Almost all distributors are provided with some type of adjustment enabling the ignition timing to be reset without disturbing the calibration of the distributor advance mechanism. Retarded ignition timing will eliminate or reduce detonation but will result in decreased performance and fuel economy. Also, in most cases, an ignition setting slightly in advance of the factory setting will result in additional performance and economy, although such an ignition setting will require a fuel of higher antiknock value than the standard setting.

Carburetors

Carburetors should not be adjusted or jets changed except by qualified mechanics. Correct fuel (or float) levels are extremely important to satisfactory performance and fuel economy — factory specifications should be strictly maintained.

Valves

Valve tappet clearances are extremely important. Frequent checking of valve tappet clearances will add materially to the proper functioning and long life of valves.

LIST OF ABBREVIATIONS

AC	AC Spark Plug Division, GMC
Adv	Advance
AL	The Electric Auto-Lite Company
AMA	Automobile Manufacturers Association
ATC	After Top Center
BTC	Before Top Center
Bmep	Brake mean effective pressure
C	Cold (valve adjustment)
Car	Carter (carburetors)
Centrif	Centrifugal
Champ	Champion Spark Plug Company
Clr	Clearance
CNS	Chrome Nickel Steel
DD	Downdraft
Deg	Degrees
DR	Delco-Remy Division, GMC
Eng	Engine
Eqpt	Equipment
Exh	Exhaust
H	Hot (valve adjustment)
HP	Horsepower
Hyd Lifters	Hydraulic Lifters
I	In-head (overhead valves)
Int	Intake
L	L-head
Max	Maximum
No. Cyl	Number of Cylinders
OD	Overdrive
Recm Press	Recommended Pressure (tires)
RP	Rochester Products (carburetors)
SD	Side Draft
Sil	Silchrome
Sgl	Single
Std	Standard
Strom	Stromberg Carburetor Company
TDC	Top Dead Center
Trans	Transmission
Vac	Vacuum

SUMMARY OF CHARACTERISTICS
1956 UNITED STATES PASSENGER CARS

Specifications for Four-Door Sedans

	1955	1956	Change
Number of Makes	19	19	....
Number of Models	53	50	-3

ENGINE CHARACTERISTICS:

Average Standard Compression Ratio	7.96	8.55	+0.59
Highest Standard Compression Ratio	9.00	10.00	+1.00
Lowest Standard Compression Ratio	7.20	7.20	....
Average Displacement, Cubic Inches	270.7	296.7	+26.0
Average Maximum Brake Horsepower	173.1	206.8	+33.7
Average RPM at Maximum Horsepower	4279	4402	+123
Average Horsepower Per Cubic Inch	0.627	0.686	+0.059
Average Brake Mean Effective Pressure, PSI ...	140.6	148.0	+7.4
Maximum Horsepower Per Cubic Inch	0.755	0.791	+0.036
Minimum Horsepower Per Cubic Inch	0.460	0.535	+0.075
Average lb/HP—6 Passenger Sedan	22.05	19.07	-2.98

**Rated Horsepower With
Standard Compression Ratio:**

		Number of Models	
Under 75	2	1	-1
75-99	2	0	-2
100-149	13	10	-3
150-199	18	8	-10
200-249	11	17	+6
249-300	7	14	+7

See Curve on Page 34

BUICK

CAR MODEL	Special Series 40	Century Series 60	Super & Roadmaster Series 50 & 70
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	4.0 x 3.2	4.0 x 3.2	4.0 x 3.2
Displacement (cu in)	322	322	322
AMA Horsepower	51.2	51.2	51.2
Max Horsepower @ rpm	220 @ 4400 (1)	255 @ 4400	255 @ 4400
Max Torque, lb-ft @ rpm	319 @ 2400 (1)	341 @ 3200	341 @ 3200
Max bmep, lb/sq in	149.4 (1)	159.7	159.7
Compression Ratio	8.9 (1)	9.5	9.5
IGNITION			
Spark Plug—Factory Eqpt	AC 44	AC 44	AC 44
Alternate		Champion J-8, AL A5 or AR5	
Spark Plug Gap .....		.030" to .035"	
Firing Order		1-2-7-8-4-5-6-3	
Distributor—Make and Model...		Delco-Remy 1110861	
Breaker Gap .....		.0125" to .0175"	
Cam Angle			
Timing—Crankshaft Degrees ...	5° BTC	5° BTC	5° BTC
Adv Deg—Centrif—Vac	24-1/2-19-1/2	24-1/2-19-1/2	24-1/2-19-1/2
Adv Begins—Ends—Eng rpm	625-3500	625-3500	625-3500
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int Exh	1.750", SAE 8645	
Tappet Clr—Seat Angle.....	Int Exh	1.375", S11 10, 2155N or 21-4NS	
Exhaust Seat Inserts	None	Hydraulic Lifters, 45° Hydraulic Lifters, 45°	None
CARBURETOR			
Make, Model	Car WGD or Strom WW	Car WCFB or RP 4GC	
Type	Dual DD	4 Barrel DD	
Floaf Level	(3)	(3)	(3)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 3.0		
Overdrive, Axle Ratio			
Automatic, Axle Ratio	Opt, 3.2	Std, 3.36	Std, 3.36
Make Automatic (see page 30) ..	Dynaflow	Dynaflow	Dynaflow
CAPACITY			
Oil (Refill)	(qt) 6	6	6
Water (includes heater)....	(qt) 19	19	19
Transmission	(pt) 2-1/2 (4)	21	21
Rear Axle	(pt) 6	6	6
Gasoline	(gal) 19	19	19
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 122	122	127
Over All Lgth Incl Bumpers (in)	205.1	205.1	213.6
Shipping Weight	(lb) 3790	4000	4200 (5)
Tire Size—Recm Press.....	(lb) 7.10x15-24-24(6)7.60 x 15-24-24		(7)

LOCATION CHASSIS SERIAL NO. Left Front Door Pillar Post

- (1) Hp, torque, bmep and comp. ratio for engines equipped with Dynaflow. For conventional transmission the compression ratio is 7.6 and power figures are not available.
- (2) Stromberg WW: 3/16" from top of float chamber without gasket to top of float. Carter WGD: 1/4" vertical distance between top of float and machined surface of casting.
- (3) Carter WCFB: 3/16" from machined surface of cover to top of float. Rochester 4GC: 1 33/64" between bottom of float and bowl cover gasket with bowl cover assembly inverted.
- (4) Dynaflow transmission requires 21 pints.
- (5) Roadmaster 4280.
- (6) 7.60 x 15-24-24 optional.
- (7) Super 7.60 x 15-24-24. Roadmaster 8.00 x 15-24-24.

Brief Passenger Car Data for 1956

January 1, 1956

CADILLAC

CAR MODEL	62	60 Special	75
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	4.000 x 3.625	4.000 x 3.625	4.000 x 3.625
Displacement (cu in)	365	365	365
AMA Horsepower	51.2	51.2	51.2
Max Horsepower @ rpm	285 @ 4600 (1)	285 @ 4600	285 @ 4600
Max Torque, lb-ft @ rpm	400 @ 2800 (1)	400 @ 2800	400 @ 2800
Max bmep, lb/sq in	165.2	165.2	165.2
Compression Ratio	9.75	9.75	9.75
IGNITION			
Spark Plug—Factory Eqpt	AC 44	AC 44	AC 44
Alternate		Champion J-8, AL A5 or AR5	
Spark Plug Gap	.035"	.035"	.035"
Firing Order		1-8-4-3-6-5-7-2	
Distributor—Make and Model		Delco Remy 1110867-1110868	
Breaker Gap	.016"	.016"	.016"
Cam Angle	31° ± 1-1/2°	31° ± 1-1/2°	31° ± 1-1/2°
Timing—Crankshaft Degrees	5° BTC	5° BTC	5° BTC
Adv Deg—Centrif—Vac	20-29-1/2	20-29-1/2	20-29-1/2
Adv Begins—Ends—Eng rpm	900-3900	900-3900	900-3900
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int Exh	1-3/4", SAE 8645 or SAE 3140 1-9/16", Sil X-10 or 2112 N	
Tappet Ctr—Seat Angle	Int Exh	Hydraulic Lifters, 45° Hydraulic Lifters, 45°	
Exhaust Seat Inserts	None	None	None
CARBURETOR			
Make, Model		Car WCFB 2333 S or RP 7008750 (2)	
Type		DD, 4 Barrel	
Float Level		Car Pri 1/8", Sec 3/16"; RP 1 19/32" (3)	
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio			
Overdrive, Axle Ratio			
Automatic, Axle Ratio	Std, 3.07 (4)	Std, 3.07 (4)	Std, 3.36
Make Automatic (see page 30)	Hydra-Matic	Hydra-Matic	Hydra-Matic
CAPACITY			
Oil (Refill)	(qt) 5	5	5
Water (includes heater)	(qt) 19.5	19.5	22.0
Transmission	(pt) 26	26	26
Rear Axle	(pt) 5	5	5
Gasoline	(gal) 20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 129	133	149.8
Over All Lgth Incl Bumpers	(in) 214.9 (5)	225.9	235.7
Shipping Weight	(lb) 4430	4610	5050
Tire Size—Recm Press	(lb) 8.00x15-24-24 (6)8.00x15-24-24 (6)8.20x15-28-28		
LOCATION CHASSIS SERIAL NO.			
		Left Front Door Pillar Post	

- (1) Eldorado uses two 4 barrel carburetors giving 305 bhp @ 4700 rpm and 400 lb ft torque @ 3200 rpm.
- (2) Air conditioned cars use Car WCFB 2434S or RP 7008751 carburetor.
- (3) Carter: Distance between float and machined surface of bowl cover casting, bowl cover assembly inverted. Rochester: Distance between bottom of float and bowl cover gasket, bowl cover assembly inverted.
- (4) 3.36 ratio standard on Eldorado engine equipped cars and optional on others.
- (5) Coupes, convertibles and 4-door hardtops 221.9; Eldorado 222.2.
- (6) All white sidewall tires are 8.20 x 15.

CHEVROLET

CAR MODEL	Bel-Air Two-Ten One-Fifty Six	Bel-Air Two-Ten One-Fifty Conventional	Bel-Air Two-Ten One-Fifty Powerglide
ENGINE			
No. Cyl-Head Type	6-I	V-8-I	V-8-I
Bore and Stroke (in)	3-9/16x3-15/16	3-3/4 x 3	3-3/4 x 3
Displacement (cu in)	235.5	265	265
AMA Horsepower	30.4	45.0	45.0
Max Horsepower @ rpm	140 @ 4200	162 @ 4400 (1)	170 @ 4400 (1)
Max Torque, lb-ft @ rpm	210 @ 2400	257 @ 2200 (1)	257 @ 2400 (1)
Max bmep, lb/sq in	134.5	146.2	146.2
Compression Ratio	8.0	8.0 (1)	8.0 (1)
IGNITION			
Spark Plug—Factory Eqpt	AC 44	AC 44	AC 44
Alternate	Champion J-8, AL	A5 or AR5	
Spark Plug Gap	.035"	.035"	.035"
Firing Order	1-5-3-6-2-4	1-8-4-3-6-5-7-2	
Distributor—Make and Model	DR 1112403	DR 1110847	DR 1110866
Breaker Gap	.016" (worn)	.016" (worn)	.016" (worn)
Cam Angle	26° to 33°	26° to 33°	26° to 33°
Timing—Crankshaft Degrees	TDC @ Idle	4° BTC @ Idle	4° BTC @ Idle
Adv Deg—Centrif—Vac	26-15	32-22	28-22
Adv Begins—Ends—Eng rpm	600-3500	600-3600	600-3500
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int 1.875", 8645 Exh 1.50" MXCR (2)	1.72", 8645 1.50" MXCR (2)	1.72", 8645 1.50" MXCR (2)
Tappet Clr—Seat Angle	Int Hyd Lifters, 30° Exh Hyd Lifters, 45°	Hydraulic Lifters, 45°	Hydraulic Lifters, 45°
Exhaust Seat Inserts	None	None	None
CARBURETOR			
Make, Model	RP 7009255	RP 7008387	RP 7008388
Type	Sgl DD	Dual DD	Dual DD
Float Level	1-5/16" (3)	1-1/4" (3)	1-1/4" (3)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 3.7	Std, 3.7	
Overdrive, Axle Ratio	Opt, 4.11	Opt, 4.11	
Automatic, Axle Ratio	Opt, 3.55		Std, 3.55
Make Automatic (see page 30)	Powerglide		Powerglide
CAPACITY			
Oil (Refill)	(qt) 5	4	4
Water (includes heater)	(qt) 17	17	17
Transmission	(pt) 2 (4)	2 (5)	22
Rear Axle	(pt) 4	4	4
Gasoline	(gal) 16	16	16
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 115	115	115
Over All Lgth Incl Bumpers	(in) 197.5	197.5	197.5
Shipping Weight	(lb) 3220 (6)	3192	3293
Tire Size—Recm Press	(lb) 6.70 x 15-24-24	6.70 x 15-24-24	6.70 x 15-24-24
LOCATION CHASSIS SERIAL NO.			
	Left Front Body Hinge Pillar		
(1)	205 bhp @ 4600 rpm and 268 lb ft @ 3000 rpm with 9.25 compression ratio, four-barrel carburetor and dual-exhaust system.		
(2)	All exhaust valves alidip coated.		
(3)	Distance between bottom of float and bowl cover gasket with bowl cover assembly inverted.		
(4)	One pint additional with overdrive. Powerglide requires 22 pints.		
(5)	One pint additional with overdrive.		
(6)	3321 pounds with Powerglide transmission.		

CHRYSLER

CAR MODEL	Windsor C-71	New Yorker C-72
ENGINE		
No. Cyl-Head Type	V-8-I	V-8-I
Bore and Stroke (in)	3.81 x 3.63	3.94 x 3.63
Displacement (cu in)	331	354
AMA Horsepower	46.5	49.7
Max Horsepower @ rpm	225 @ 4400 (1)	280 @ 4600
Max Torque, lb-ft @ rpm	310 @ 2400 (1)	380 @ 2800
Max bmep, lb/sq in	141.2	161.9
Compression Ratio	8.5	9.0
IGNITION		
Spark Plug—Factory Eqpt	AL AR-52	AL AGR-42
Alternate	AC R45S, Champ J-18Y	AC R44XLS, Champ N-16Y
Spark Plug Gap .....	.035"	.035"
Firing Order	1-3-4-3	6-5-7-2
Distributor—Make and Model ..	AL IBJ-4303C	AL IBK-4301A
Breaker Gap .....	.017"	.017"
Cam Angle	29° to 32°	29° to 32° Per Breaker
Timing—Crankshaft Degrees ..	2° BTC	4° BTC
Adv Deg—Centrif—Vac	28-23	19-23
Adv Begins—Ends—Eng rpm ...	700-4050	700-4800
Battery—Volts, Terminal Ground	12, Negative	12, Negative
VALVES		
Size and Material	Int 1.81", Sil P Exh 1.50", 21-4N	1.94", Sil P 1.75", 21-4N
Tappet Clr—Seat Angle	Int Hydraulic Lifters, 45° Exh Hydraulic Lifters, 45°	Hydraulic Lifters, 45° Hydraulic Lifters, 45°
Exhaust Seat Inserts	None	None
CARBURETOR		
Make, Model	Car BBD 2312S (1)	Car WCFB 2314S
Type	Dual DD	DD 4 Barrel
Float Level	7/32" (2)	Pri 1 8"; Sec 3/16" (3)
Choke Control	Automatic	Automatic
TRANSMISSION AND AXLE		
Conventional, Axle Ratio	Std, 3.73	
Overdrive, Axle Ratio		Std, 3.36
Automatic, Axle Ratio	Opt, 3.54	PowerFlite
Make Automatic (see page 30) ..	PowerFlite	
CAPACITY		
Oil (Refill)	(qt) 5	5
Water (includes heater)	(qt) 25	26
Transmission	(pt) 2-3/4 (4)	22
Rear Axle	(pt) 3-1/4	3-1/2
Gasoline	(gal) 21	21
GENERAL DATA (Four-Door Sedan)		
Wheelbase	(in) 126.0	126.0
Over All Lgth Incl Bumpers (in)	219.9	221.2
Shipping Weight	(lb) 3900	4110
Tire Size—Recm Press	(lb) 7.60 x 15-24-24	8.00 x 15-24-24
LOCATION CHASSIS SERIAL NO.		
	Left Front Door	Body Hinge Post

- (1) Special power package engine available with 250 bhp @ 4600 rpm, 340 lb-ft @ 2800 rpm. Power package contains 4 barrel Car WCFB 2367S carburetor.
- (2) From top of float chamber to top of float.
- (3) Between machined surface of bowl cover and nearest point on float.
- (4) 20 pints when PowerFlite transmission is used.

CONTINENTAL

CAR MODEL	Mark II
ENGINE	
No. Cyl-Head Type	V-8-I
Bore and Stroke (in)	4.00x3.66
Displacement (cu in)	368
AMA Horsepower	51.2
Max Horsepower @ rpm	
Max Torque, lb-ft @ rpm	
Max bmep, lb/sq in	
Compression Ratio	9.0
IGNITION	
Spark Plug—Factory Eqpt	Champion 860
Alternate	AC 84T or AL BTF-6
Spark Plug Gap .....	.032" to .036"
Firing Order	1-5-4-8-6-3-7-2
Distributor—Make and Model	Holley FDU-12127-B
Breaker Gap .....	.014" to .016"
Cam Angle	26° to 28.5°
Timing—Crankshaft Degrees ...	5° BTC
Adv Deg—Centrif—Vac	(1)
Adv Begins—Ends—Eng rpm ...	(1)
Battery—Volts, Terminal Ground	12, Negative
VALVES	
Size and Material	Int 2.0", Silchrome #1
Exh	1.63", Ford Cast Austenitic
Tappet Clr—Seat Angle	Int Hydraulic Lifters, 45°
Exh	Hydraulic Lifters, 45°
Exhaust Seat Inserts	None
CARBURETOR	
Make, Model	Ford-Holley
Type	DD 4 Barrel
Float Level	1/2" (2)
Choke Control	Automatic
TRANSMISSION AND AXLE	
Conventional, Axle Ratio	
Overdrive, Axle Ratio	
Automatic, Axle Ratio	Std, 3.07
Make Automatic (see page 30) ..	Turbo-Drive
CAPACITY	
Oil (Refill)	(qt) 5
Water (includes heater)	(qt) 25.5
Transmission	(pt) 20
Rear Axle	(pt) 4
Gasoline	(gal) 25
GENERAL DATA (Four-Door Sedan)	
Wheelbase	(in) 126
Over All Lgth Incl Bumpers (in)	218.5
Shipping Weight	(lb) 4825
Tire Size—Recm Press	(lb) 8.00 x 15-26-24 (3)
LOCATION CHASSIS SERIAL NO.	
	Left Front Door Pillar Post
(1) Full vacuum actuated distributor—maximum advance with wide-open throttle is 26-1/2° @ 4000 rpm.	
(2) From top of bowl without gasket to fuel level.	
(3) 8.20 x 15 standard on air conditioned cars.	

DE SOTO

CAR MODEL	Piredome S-23	Pireflite S-24
ENGINE		
No. Cyl-Head Type	V-8-I	V-8-I
Bore and Stroke (in)	3.72 x 3.80	3.72 x 3.80
Displacement (cu in)	330	330
AMA Horsepower	44.3	44.3
Max Horsepower @ rpm	230 @ 4400	255 @ 4400
Max Torque, lb-ft @ rpm	305 @ 2800	350 @ 3200
Max bmep, lb/sq in	139.4	160.0
Compression Ratio	8.5	8.5
IGNITION		
Spark Plug—Factory Eqpt	AL AR 52	AL AR 52
Alternate	AC R45S or Champ J-18Y	
Spark Plug Gap .....	.035"	.035"
Firing Order	1-8-4-3	6-5-7-2
Distributor—Make and Model	AL IBJ 4302-C	AL IBJ 4302-D
Breaker Gap .....	.017"	.017"
Cam Angle	29° to 32°	29° to 32°
Timing—Crankshaft Degrees ...	8° BTC	4° BTC
Adv Deg—Centrif—Vac	12-23	16-23
Adv Begins—Ends—Eng rpm ...	700-1600	700-1400
Battery—Volts, Terminal Ground	12, Negative	12, Negative
VALVES		
Size and Material	Int 1.94", Sil F	1.94", Sil F
Exh 1.75", 21-4N		1.75", 21-4N
Tappet Ctr—Seat Angle	Int Hydraulic Lifters, 45°	Hydraulic Lifters, 45°
Exh Hydraulic Lifters, 45°		
Exhaust Seat Inserts	None	None
CARBURETOR		
Make, Model	Car BBD 2308S	Car WCFB 2311S
Type	Dual DD	DD 4 Barrel
Float Level	7/32" (1)	Pri 1/8"; Sec 3/16" (2)
Choke Control	Automatic	Automatic
TRANSMISSION AND AXLE		
Conventional, Axle Ratio	Std. 3.9	
Overdrive, Axle Ratio	Opt. 4.3	
Automatic, Axle Ratio	Opt. 3.73	Std. 3.54
Make Automatic (see page 30) ..	PowerFlite	PowerFlite
CAPACITY		
Oil (Refill)	(qt) 4	4
Water (includes heater)	(qt) 24	24
Transmission	(pt) 2-3/4 (3)	20
Rear Axle	(pt) 3-1/4	3-1/2
Gasoline	(gal) 21	21
GENERAL DATA (Four-Door Sedan)		
Wheelbase	(in) 126 0	126 0
Over All Lgth Incl Bumpers (in)	217 9	217 9
Shipping Weight	(lb) 3855	4005
Tire Size—Recm Press	(lb) 7 60 x 15-24-24	7 60 x 15-24-24
LOCATION CHASSIS SERIAL NO		
Left Front Door Body Hinge Post		
(1) From top of float chamber without gasket to top of float at center.		
(2) Between machined surface of bowl cover and top of float.		
(3) 3/4 pint additional with overdrive. PowerFlite requires 20 pints.		

DODGE

CAR MODEL	Coronet D-62-1	Coronet D-63-1	Royal & Custom Royal D-63-2&D-63-3
ENGINE			
No. Cyl-Head Type	6-L	V-8-I	V-8-I
Bore and Stroke (in)	3.25 x 4.63	3.63 x 3.256	3.63 x 3.80
Displacement (cu in)	230	270	315
AMA Horsepower	25.4	42.2	42.2
Max Horsepower @ rpm	131 @ 3800	189 @ 4400	218 @ 4400 (1)
Max Torque, lb-ft @ rpm	203 @ 2000	266 @ 2400	309 @ 2000 (1)
Max bmep, lb/sq in	133.1	148.6	147.9 (1)
Compression Ratio	7.6	8.0	8.0
IGNITION			
Spark Plug—Factory Eqpt	AL AR-80	AL AR-52	AL AR-52
Alternate	AC R46, Champ J-11	AC R45S or Champ J-18Y	AC R45S or Champ J-18Y
Spark Plug Gap .....	.035"	.035"	.035"
Firing Order	1-5-3-6-2-4	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
Distributor—Make and Model...	AL IAT-4101B	AL IBJ-4301A	AL IBJ-4303 (1)
Breaker Gap .....	.020"	.017"	.017"
Cam Angle	39° ± 3°	29° to 32°	29° to 32°
Timing—Crankshaft Degrees ...	2° BTC	4° BTC	6° BTC
Adv Deg—Centrif—Vac	16-16	30-25	32-22
Adv Begins—Ends—Eng rpm ...	800-2700	700-4300	700-4700
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int 1.53", S11 1 Exh. 1.41", XCR	1.72", S11 F 1.47", XCR	1.72", S11 F 1.47", XCR
Tappet Clr—Seat Angle.....	Int .010" H, 45° Exh. .010" H, 45°	Hydraulic Lifters, 45° Hydraulic Lifters, 45°	Hydraulic Lifters, 45° Hydraulic Lifters, 45°
Exhaust Seat Inserts	Yes	None	None
CARBURETOR			
Make, Model	Strom WW3-124	Strom WW3-135	Strom WW3-138 (1)
Type	Dual DD	Dual DD	Dual DD (1)
Float Level	3/16" (2)	3/16" (2)	3/16" (2)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 3.9	Std, 3.73	Std, 3.73
Overdrive, Axle Ratio	Opt, 4.3	Opt, 4.1	Opt, 4.1
Automatic, Axle Ratio	Opt, 3.73	Opt, 3.54	Opt, 3.54
Make Automatic (see page 30) ..	PowerFlite	PowerFlite	PowerFlite
CAPACITY			
Oil (Refill)	(qt) 5	5	5
Water (Includes heater)	(qt) 14	20	21
Transmission	(pt) 2-3/4 (3)	2-3/4 (3)	2-3/4 (3)
Rear Axle	(pt) 3-1/4	3-1/4	3-1/4
Gasoline	(gal) 17	17	17
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 120	120	120
Over All Lgth Incl Bumpers (in)	212	212	212
Shipping Weight	(lb) 3295	3435	3475 (4)
Tire Size—Recm Press.....	(lb) 6.70x15-24-24(5)7.10x15-24-24(6)7.60x15-24-24		

LOCATION CHASSIS SERIAL NO. Left Front Door Body Hinge Post

- (1) With special power package 230 bhp @ 4400 rpm, 316 lb ft @ 2400 rpm, 151.3 bmep. Power package consists of Carter 4-barrel WCFB 2303S carburetor, dual exhaust system, and Auto-Lite IBJ-4303B distributor.
- (2) From top of float chamber without gasket to top of float.
- (3) 3/4 pint additional with OD: PowerFlite requires 20 pints.
- (4) Weight given for Royal. Custom Royal weighs 3520 pounds.
- (5) 7.10 x 15 optional.
- (6) 7.60 x 15 optional.

CAR MODEL	Mainline Customline Fairlane Six	Mainline Customline Eight	Fairlane Eight
ENGINE			
No. Cyl-Head Type	6-I	V-8-I	V-8-I
Bore and Stroke (in)	3.62 x 3.60	3.62 x 3.30	3.75 x 3.30
Displacement (cu in)	223	272	292
AMA Horsepower	31.5	42.05	45.0
Max Horsepower @ rpm	137 @ 4200	173 @ 4400 (1)	200 @ 4600 (2)
Max Torque, lb-ft @ rpm	202 @ 2000-2400	260 @ 2400 (1)	285 @ 2600 (2)
Max bmep, lb/sq in	136.6	144.2	147.2
Compression Ratio	8.0	8.0 (1)	8.0 (2)
IGNITION			
Spark Plug—Factory Eqpt	Champ 870	Champ 870	Champ 870
Alternate	AC 85T, AL BP-7 or BRF-8		
Spark Plug Gap .....	.032" to .036"	.032" to .036"	.032" to .036"
Firing Order	1-5-3-6-2-4	1-5-4-8-6-3-7-2	1-5-4-8-6-3-7-2
Distributor—Make and Model...	Holley FDR 12127A	Holley FDS 12127A	Holley FDT 12127B
Breaker Gap .....	.024" to .026"	.014" to .016"	.014" to .016"
Cam Angle	35° to 38°	26° to 28.5°	26° to 28.5°
Timing—Crankshaft Degrees ..	3° BTC (3)	3° BTC (3)	3° BTC (3)
Adv Deg	27° (4)	33.2° (4)	27.4° (4)
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int Exh	1.78", Silchrome #1	
Tappet Clr—Seat Angle.....	Int Exh	1.51", Ford Cast Austenitic	
		.019" H, 45°	
		.019" H, 45°	
Exhaust Seat Inserts	None	None	None
CARBURETOR			
Make, Model	Holley EBP-9510 H&J	Holley ECG-9510 S&T	Holley ECZ-9510 A&B
Type	Sgl DD	Dual DD	DD 4 Barrel
Float Level	11, 16" (5)	11/16" (6)	1/2" (6)
Choke Control	Manual	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 3.89	Std, 3.78	Std, 3.78
Overdrive, Axle Ratio	Opt, 4.11	Opt, 3.89	Opt, 3.89
Automatic, Axle Ratio	Opt, 3.23	Opt, 3.23	Opt, 3.23
Make Automatic (see page 301) ..	Fordomatic	Fordomatic	Fordomatic
CAPACITY			
Oil (Refill)	(qt) 4	5	5
Water (includes heater).....	(qt) 15.5	20	20
Transmission	(pt) 3 (7)	3 (7)	3 (7)
Rear Axle	(pt) 3-1/2	3-1/2	3-1/2
Gasoline	(gal) 17-1/2	17-1/2	17-1/2
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 115.5	115.5	115.5
Over All Lgth Incl Bumpers.....	(in) 198.5	198.5	198.5
Shipping Weight	(lb) 3156	3278	3319
Tire Size—Recm Press.....	(lb) 6.70 x 15-26-23	6.70 x 15-26-23	6.70 x 15-26-23
LOCATION CHASSIS SERIAL NO.			
	Left Front Door	Door	Pillar Post

- (1) 176 bhp, 264 lb-ft torque and 146.4 bmep with 8.4 compression ratio when Fordomatic transmission is used.
- (2) 202 bhp, 289 lb-ft torque and 149.3 bmep with 8.4 compression ratio when Fordomatic transmission is used.
- (3) 3° BTC with standard or overdrive; 6° BTC with Fordomatic.
- (4) Full vacuum actuated distributor—advance shown is the maximum at wide open throttle, 4000 rpm.
- (5) From power valve mounting surface to fuel level.
- (6) From top of bowl to fuel level.
- (7) 4-1/2 pints with overdrive, Fordomatic Six, 18.7 pints; V-8, 19.5 pints.

HUDSON

CAR MODEL	Wasp	Hornet 6	Hornet V-8
ENGINE			
No. Cyl-Head Type	6-L	6-L	V-8-I
Bore and Stroke (in)	3 x 4-3/4	3-13/16 x 4-1/2	4 x 3-1/2
Displacement (cu in)	202	308	352
AMA Horsepower	21.6	34.88	51.2
Max Horsepower @ rpm	120 @ 4000 (1)	165 @ 3800 (2)	220 @ 4600
Max Torque, lb-ft @ rpm	158 @ 1400 (1)	264 @ 1800 (2)	320 @ 2200-2500
Max bmep, lb/sq in	117.9	129.3	137
Compression Ratio	7.5 (1)	7.5	9.55
IGNITION			
Spark Plug—Factory Eqpt	Champ H-10	Champ H-11	Champ N-18
Alternate	AC 45L	AC 45L	AL AGR41,
Spark Plug Gap	AL AL7	AL AL9	AL 46XL
	.032"	.032"	.035"
Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-8-4-3-6-5-7-2
Distributor—Make and Model...	AL IAT-4202	AL IAT-4203A	AL IBJ-4001-D
Breaker Gap .....	.018" to .020"	.018" to .020"	.015" to .018"
Cam Angle	36° to 42°	36° to 42°	28° to 34°
Timing—Crankshaft Degrees ...	TDC	TDC	5° BTC
Adv Deg—Centrif—Vac	27-15	18-8	28-24
Adv Begins—Ends—Eng rpm ...	600-3000	1000-4000	600-3400
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int 1.5", 8645	1.831", 8645	2.000", S11 1
	Exh 1.4", 2112	1.556", 2112	1.687", 2112
Tappet Clr—Seat Angle.....	Int .010" C, 45°	Hyd Lifters, 45°	Hyd Lifters, 30°
	Exh .015" C, 45°	Hyd Lifters, 45°	Hyd Lifters, 45°
Exhaust Seat Inserts	None	None	None
CARBURETOR			
Make, Model	Car WAI	Car WDG	Car WGD
	2009 SA	2252 S	2231 S
Type	Sgl DD (3)	Sgl DD (3)	Dual DD
Float Level	7/16" (4)	1/4" (5)	3/16" (5)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 4.1	Std, 4.1 (6)	
Overdrive, Axle Ratio	Opt, 4.4	Opt, 4.4 (6)	
Automatic, Axle Ratio	Opt, 3.58	Opt, 3.15	Std, 3.15
Make Automatic (see page 30) ..	Hydra-Matic	Hydra-Matic	Twin Ultramatic
CAPACITY			
Oil (Refill)	(qt) 5	7	5
Water (includes heater).....	(qt) 14	19.5	28
Transmission	(pt) 2-1/4 (7)	2-1/4 (8)	22
Rear Axle	(pt) 3	4	4
Gasoline	(gal) 20	20	20

GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 114-1/4	121-1/4	121-1/4
Over All Lgth Incl Bumpers (in)	202-1/4	209-1/4	209-1/4
Shipping Weight	(lb) 3264	3545	3862
Tire Size—Recm Press	(lb) 6 70 x 15-24-24	7 10 x 15-24-24	7 60 x 15-24-24

LOCATION CHASSIS SERIAL NO Under Hood on Dash Panel

- 8.0 to 1 compression ratio aluminum head and two carburetor system optional. 130 bhp @ 4000 rpm, 168 lb ft @ 1800 to 3000 rpm.
- Optional two carburetor system available giving 175 bhp @ 4000 rpm, 278 lb ft @ 1800 to 2800 rpm.
- Two single downdraft carburetors optional.
- From projection on bowl cover to seam of float, cover inverted.
- From bowl cover to top of float with cover assembly inverted.
- 4.4 ratio optional with std transmission. 4.1 optional with OD.
- 3-1/2 pints with overdrive. 7 pints refill with Hydra-Matic.
- 3-1/2 pints with overdrive. 22 pints refill with Hydra-Matic.

IMPERIAL

CAR MODEL	Imperial C-73	Crown Imperial C-70
ENGINE		
No. Cyl-Head Type	V-8-I	V-8-I
Bore and Stroke (in)	3.94 x 3.63	3.94 x 3.63
Displacement (cu in)	354	354
AMA Horsepower	49.7	49.7
Max Horsepower @ rpm	280 @ 4600	280 @ 4600
Max Torque, lb-ft @ rpm	380 @ 2800	380 @ 2800
Max bmep, lb/sq in	161.9	161.9
Compression Ratio	9.0	9.0
IGNITION		
Spark Plug—Factory Eqpt	AL AGR-42	AL AGR-42
Alternate	AC R44XLS	Champ N-16Y
Spark Plug Gap .....	.035"	.035"
Firing Order	1-8-4-3-6-5-7-2	
Distributor—Make and Model	AL IBK 4301-A	AL IBK 4301-A
Breaker Gap .....	.017"	.017"
Cam Angle	29° to 32° Per Breaker	
Timing—Crankshaft Degrees	4° BTC	4° BTC
Adv Deg—Centrif—Vac	19-23	19-23
Adv Begins—Ends—Eng rpm	700-4800	700-4800
Battery—Volts, Terminal Ground	12, Negative	12, Negative
VALVES		
Size and Material	Int 1.94", Sil F	1.94", Sil F
Exh 1.75", 21-4N		1.75", 21-4N
Tappet Ctr—Seat Angle	Int Hydraulic Lifters, 45°	Hydraulic Lifters, 45°
Exh Hydraulic Lifters, 45°		
Exhaust Seat Inserts	None	None
CARBURETOR		
Make, Model	Car WCFB 2314S	Car WCFB 2314S
Type	DD 4 Barrel	DD 4 Barrel
Float Level	Primary 1/8"; Secondary 3/16" (1)	
Choke Control	Automatic	Automatic
TRANSMISSION AND AXLE		
Conventional, Axle Ratio		
Overdrive, Axle Ratio		
Automatic, Axle Ratio	Std, 3.54	Std, 3.54
Make Automatic (see page 30) ..	PowerFlite	PowerFlite
CAPACITY		
Oil (Refill)	(qt) 5	5
Water (includes heater)	(qt) 26	26
Transmission	(pt) 22	22
Rear Axle	(pt) 3-1/2	5
Gasoline	(gal) 21	21
GENERAL DATA (Four-Door Sedan)		
Wheelbase	(in) 133.0	149.5
Over All Lgth Incl Bumpers (in)	229.6	243.6
Shipping Weight	(lb) 4565	NA
Tire Size—Recm Press	(lb) 8.20 x 15-24-24	8.20 x 15-24-24
LOCATION CHASSIS SERIAL NO		
	Left Front Door Body Hinge Post	
(1) Between machined surface of bowl cover and nearest point on float.		

LINCOLN

CAR MODEL	Capri and Premiere
ENGINE	
No. Cyl-Head Type	V-8-1
Bore and Stroke (in)	4.00 x 3.66
Displacement (cu in)	368
AMA Horsepower	51.2
Max Horsepower @ rpm	285 @ 4600
Max Torque, lb-ft @ rpm	402 @ 3000
Max bmep, lb/sq in	164.7
Compression Ratio	9.0
IGNITION	
Spark Plug—Factory Eqpt	Champ 860
Alternate	AC 84T, AL BTF-6
Spark Plug Gap .....	.032" to .036"
Firing Order	1-5-4-8-6-3-7-2
Distributor—Make and Model...	Holley FDU-12127-B
Breaker Gap .....	.014" to .016"
Cam Angle	26° to 28.5°
Timing—Crankshaft Degrees ...	5° BTC
Adv Deg—Centrif—Vac	(1)
Adv Begins—Ends—Eng rpm ...	(1)
Battery—Volts, Terminal Ground	12, Negative
VALVES	
Size and Material	Int 2.0", Silchrome ± 1
Exh	1.63", Ford Cast Austenitic
Tappet Ctr—Seat Angle	Int Hydraulic Lifters, 45°
Exh	Hydraulic Lifters, 45°
Exhaust Seat Inserts	None
CARBURETOR	
Make, Model	Holley ECU-9510C
Type	DD 4 Barrel
Float Level	1/2" (2)
Choke Control	Automatic
TRANSMISSION AND AXLE	
Conventional, Axle Ratio	
Overdrive, Axle Ratio	
Automatic, Axle Ratio	Standard, 3.07 (3)
Make Automatic (see page 30) ..	Turbo-Drive
CAPACITY	
Oil (Refill)	(qt) 5
Water (includes heater)	(qt) 25.4
Transmission	(pt) 20
Rear Axle	(pt) 4
Gasoline	(gal) 20
GENERAL DATA (Four-Door Sedan)	
Wheelbase	(in) 126
Over All Lgth Incl Bumpers (in)	222.8
Shipping Weight	(lb) 4289 (4)
Tire Size—Recm Press	(lb) 8.00 x 15-24-24 (5)
LOCATION CHASSIS SERIAL NO.	
Right Front Door Pillar Post	
(1) Full vacuum actuated distributor—maximum advance with wide-open throttle is 26-1/2° @ 4000 rpm.	
(2) From top of bowl without gasket to fuel level.	
(3) 3.31 axle optional, 3.31 standard on air conditioned cars.	
(4) 4362 pounds for Lincoln Premiere.	
(5) 8.20 x 15 standard on air conditioned cars.	

CAR MODEL	Custom, Monterey and Montclair
ENGINE	
No. Cyl-Head Type	V-8-I
Bore and Stroke (in)	3.80 x 3.44
Displacement (cu in)	312
AMA Horsepower	46.21
Max Horsepower @ rpm	210 @ 4600 (1)
Max Torque, lb-ft @ rpm	312 @ 2600 (1)
Max bmep, lb/sq in	150.8
Compression Ratio	8.0 (1)
IGNITION	
Spark Plug—Factory Eqpt	Champ 870
Alternate	AC 85T, AL BF-7 or BRF-8
Spark Plug Gap .....	.032" to .036"
Firing Order	1-5-4-8-6-3-7-2
Distributor—Make and Model	Holley FDT-12127-B
Breaker Gap .....	.014" to .016"
Cam Angle	28° to 28.5°
Timing—Crankshaft Degrees ...	3° BTC (2)
Adv Deg—Centrif—Vac	(3)
Battery—Volts, Terminal Ground	12, Negative
VALVES	
Size and Material	Int 1.78", Silchrome #1
Exh 1.51", Ford Cast Austenitic	
Tappet Clr—Seat Angle	Int .019" H, 45°
Exh .019" H, 45°	
Exhaust Seat Inserts	None
CARBURETOR	
Make, Model	Holley ECZ-9510 A&B
Type	DD 4 Barrel
Float Level	1/2" (4)
Choke Control	Automatic
TRANSMISSION AND AXLE	
Conventional, Axle Ratio	Std, 3.73 (5)
Overdrive, Axle Ratio	Opt, 4.09 (5)
Automatic, Axle Ratio	Opt, 3.15 (5)
Make Automatic (see page 30) ..	Merc-O-Matic
CAPACITY	
Oil (Refill)	(qt) 5
Water (includes heater)	(qt) 20
Transmission	(pt) 3-1/4 (6)
Rear Axle	(pt) 3-1/2
Gasoline	(gal) 18
GENERAL DATA (Four-Door Sedan)	
Wheelbase	(in) 119
Over All Lgth Incl Bumpers (in)	206.4
Shipping Weight	(lb) 3522 (7)
Tire Size—Recm Press.	(lb) 7.10 x 15-26-22
LOCATION CHASSIS SERIAL NO.	Right Front Door Pillar Post
(1) Two optional compression ratios are available with Merc-O-Matic transmission; 8.4 CR giving 215 bhp @ 4600 rpm, 317 lb ft torque @ 2600 rpm and 9.0 CR giving 225 bhp @ 4600 rpm, 324 lb ft @ 2600 rpm. (2) 3° BTC on all models with standard transmission or overdrive; 6° BTC with Merc-O-Matic transmission. (3) Full vacuum actuated distributor—maximum advance with wide open throttle is 27.4° @ 4000 rpm. (4) From top of float bowl without gasket to fuel level. (5) 4.09 optional with conventional transmission. 3.73 optional with overdrive. 3.54 optional with Merc-O-Matic. (6) 4-1/2 pints with overdrive. Merc-O-Matic requires 21 pints. (7) 3536 for Monterey. 3541 for Montclair.	

NASH

CAR MODEL	Statesman	Ambassador 6	Ambassador V-8
ENGINE			
No. Cyl-Head Type	6-I	6-I	V-8-I
Bore and Stroke (in)	3-1/8 x 4-1/4	3-1/2 x 4-3/8	4 x 3-1/2
Displacement (cu in)	195.6	252.6	352
AMA Horsepower	23.44	29.4	51.2
Max Horsepower @ rpm	130 @ 4500	135 @ 3700(1)	220 @ 4600
Max Torque, lb-ft @ rpm	175 @ 1800	220 @ 1600	320 @ 2200-2500
Max bmep, lb/sq in	135	131.3	137
Compression Ratio	7.44	7.6	9.55

IGNITION			
Spark Plug—Factory Eqpt	AL AL7	AL A7	Champ N-18
Alternate	AC 45L, Champ H-10	AC 45, Champ J-8	AL AGR41, AC 46XL
Spark Plug Gap	.030"	.030"	.035"
Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-8-4-3-6-5-7-2
Distributor—Make and Model	DR 1110242	AL IAT-4301	AL IBJ-4001 D
Breaker Gap	.016"	.018" to .020"	.015" to .018"
Cam Angle	28° to 35°	36° to 42°	28° to 34°
Timing—Crankshaft Degrees	TDC	4° ATC	5° BTC
Adv Deg—Centrif—Vac	32-8-1/2	28-12	28-24
Adv Begins—Ends—Eng rpm	650-3200	600-2700	600-3400
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative

VALVES			
Size and Material	Int 1-19/32", S11 1 Exh 1-11/32", 2112	1.787", 3140 1.469", 2112	2.000", S11 1 1.687", 2112
Tappet Ctr—Seat Angle	Int .012" Hor C, 45° Exh .016" Hor C, 45°	.012" H, 30° .016" H, 45°	Hyd Lifters, 30° Hyd Lifters, 45°
Exhaust Seat Inserts	None	None	None

CARBURETOR			
Make, Model	Car WCD-2350-S	Car YH-895-S(2)	Car WGD-2231-S
Type	Sgl DD	Sgl SD (2)	Dual DD
Float Level	1/2" (3)	3/8" (3)	3/16" (3)
Choke Control	Automatic	Automatic	Automatic

TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 4.4 (4)	Std, 4.1	
Overdrive, Axle Ratio	Opt, 4.9 (4)	Opt, 4.4 (5)	
Automatic, Axle Ratio	Opt, 3.58	Opt, 3.15	Std, 3.15
Make Automatic (see page 30)	Hydra-Matic	Hydra-Matic	Twin Ultramatic

CAPACITY			
Oil (Refill)	(qt) 4	6	5
Water (includes heater)	(qt) 15	18	28
Transmission	(pt) 2-1/4 (6)	2-1/4 (7)	22
Rear Axle	(pt) 3	4	22
Gasoline	(gal) 20	20	20

GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 114-1/4	121-1/4	121-1/4
Over All Lgth Incl Bumpers	(in) 202-1/4	209-1/4	209-1/4
Shipping Weight	(lb) 3199	3555	3748
Tire Size—Recm Press	(lb) 6.70 x 15-24-24	7.10 x 15-24-24	7.60 x 15-24-24

LOCATION CHASSIS SERIAL NO. Under Hood on Dash Panel

- (1) 145 bhp @ 4000 rpm, 230 lb ft @ 2000 rpm with optional LeMans Dual Jetfire engine.
- (2) Two Carter single side draft carburetors optional.
- (3) From bowl cover to top of float with bowl cover assembly inverted
- (4) 4.1 ratio optional with conventional transmission and 4.4 optional with overdrive.
- (5) 4.1 optional with overdrive.
- (6) 3-1/2 pints with overdrive. 17 pints refill with Hydra-Matic.
- (7) 3-1/2 pints with overdrive. 22 pints refill with Hydra-Matic.

OLDSMOBILE

CAR MODEL	"88"	Super "88"	Ninety-Eight
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	3-7/8 x 3-7/16	3-7/8 x 3-7/16	3-7/8 x 3-7/16
Displacement (cu in)	324.3	324.3	324.3
AMA Horsepower	48	48	48
Max Horsepower @ rpm	230 @ 4400 (1)	240 @ 4400	240 @ 4400
Max Torque, lb-ft @ rpm	340 @ 2400 (1)	350 @ 2800	350 @ 2800
Max bmep, lb/sq in	158.1 (1)	162.7	162.7
Compression Ratio	9.25	9.25	9.25
IGNITION			
Spark Plug—Factory Eqpt	AC 44	AC 44	AC 44
Alternate		Champion J-8, AL A5 or AR5	
Spark Plug Gap	.030"	.030"	.030"
Firing Order		1-8-7-3-6-5-4-2	
Distributor—Make and Model		Delco-Remy 1115088	
Breaker Gap	.016"	.016"	.016"
Cam Angle	26° to 33°	26° to 33°	26° to 33°
Timing—Crankshaft Degrees	5° BTC at 850 rpm with vacuum disconnected		
Adv Deg—Centrif—Vac	24-20	24-20	24-20
Adv Begins—Ends—Eng rpm	650-4000	650-4000	650-4000
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int Exh	1-3/4", Sll #1 1-9/16", Sllchrome XCR	
Tappet Ctr—Seat Angle	Int Exh	Hydraulic Lifters, 45° Hydraulic Lifters, 45°	
Exhaust Seat Inserts	None	None	None
CARBURETOR			
Make, Model	RP 2 GC7007223	RP 4 GC7007221	
Type	Dual DD	DD 4 Barrel	
Float Level	1-7/16" (2)	1-5/8" (3)	1-5/8" (3)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 3.64		
Overdrive, Axle Ratio			
Automatic, Axle Ratio	Opt, 3.23	Std, 3.23	Std, 3.42
Make Automatic (see page 30)	Hydra-Matic	Hydra-Matic	Hydra-Matic
CAPACITY			
Oil (Refill)	(qt) 5	5	5
Water (includes heater)	(qt) 21.5	21.5	21.5
Transmission	(pt) 2-1/2 (4)	22	22
Rear Axle	(pt) 5	5	5
Gasoline	(gal) 20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 122	122	126
Over All Lath Incl Bumpers	(in) 203.3	203.3	212.3
Shipping Weight	(lb) 3761	3897	4047
Tire Size—Recm Press	(lb) 7.10x15-24-22(5)	7.60x15-24-22(5)	7.60x15-24-22(5)
LOCATION CHASSIS SERIAL NO.			
Left Front Door Pillar Post			
(1) 240 bhp @ 4400 rpm, 350 lb ft torque @ 2800 rpm, 162.7 bmep with Quadri-Jet carburetor.			
(2) From flange of cover to bottom of float.			
(3) From cover gasket to bottom of float with bowl cover inverted and needle seated.			
(4) Hydra-Matic requires 22.4 pints (refill).			
(5) 7.60 x 15 optional for "88"; 8.00 x 15 optional for Super "88" and Ninety-Eight.			

PACKARD

CAR MODEL	Clipper Deluxe 5640	Clipper Custom 5660	Packard 5680
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	4.0 x 3.5	4.0 x 3.5	4.125 x 3.5
Displacement (cu in)	352	352	374
AMA Horsepower	51.2	51.2	54.45
Max Horsepower @ rpm	240 @ 4600	275 @ 4600	290 @ 4600 (1)
Max Torque, lb-ft @ rpm	350 @ 2800	380 @ 2800	405 @ 2800
Max bmep, lb/sq in	149.9	162.8	163.3
Compression Ratio	9.5	9.5	10.0
IGNITION			
Spark Plug—Factory Eqpt	Champ N-18	Champ N-18	Champ N-18
Alternate		AL AGR 41 or AC 46XL	
Spark Plug Gap .....	.033" to .037"	.033" to .037"	.033" to .037"
Firing Order	1 - 8 - 4 - 3 - 6 - 5	1 - 8 - 4 - 3 - 6 - 5	7 - 2
Distributor—Make and Model...	AL IBJ 4001 D	AL IBJ 4001 C	DR 1110865
Breaker Gap .....	.016"	.016"	.016"
Cam Angle	27°	27°	26° to 33°
Timing—Crankshaft Degrees ...	5° BTC	5° BTC	10° BTC
Adv Deg—Centrif—Vac	28-24	30-20	24-16
Adv Begins—Ends—Eng rpm ...	600-3400	600-4000	600-4000
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int 2.0", Sil \pm 1 Exh 1.69", 2112	2.0", Sil \pm 1 1.69", 2112	2.0", Sil \pm 1 1.69", 2112
Tappet Clr—Seat Angle.....	Int Exh	Hydraulic Lifters, 30° Hydraulic Lifters, 45°	30° 45°
Exhaust Seat Inserts	None	None	None
CARBURETOR			
Make, Model	Car WGD	Car WCFB	RP 4GC
Type	Dual DD	4 Barrel DD	4 Barrel DD (1)
Float Level	3/16" (2)	1/8" (2)	1-5/8" (3)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Opt, 3.54	Opt, 3.54	Opt, 3.54
Overdrive, Axle Ratio	Opt, 3.54	Opt, 3.54	Opt, 3.54
Automatic, Axle Ratio	Std, 3.07 (4)	Std, 3.07 (4)	Std, 3.54 (4)
Make Automatic (see page 30) ..	Ultramatic	Ultramatic	Ultramatic
CAPACITY			
Oil (Refill)	(qt) 5	5	5
Water (includes heater)	(qt) 26-1/2	26-1/2	27
Transmission	(pt) 22 (5)	22 (5)	22 (5)
Rear Axle	(pt) 4-1/4	4-1/4	4-1/4
Gasoline	(gal) 20	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 122	122	127
Over All Lgth Incl Bumpers (in)	214.8	214.8	218.5
Shipping Weight	(lb) 3700	3915	4355
Tire Size—Recm Press.	(lb) 7.60 x 15-24-24	7.60 x 15-24-24	8.00 x 15-24-24 (6)
LOCATION CHASSIS SERIAL NO.			
	Left Front Door Hinge Pillar		
(1) Packard Caribbean has special engine with two 4-barrel carburetors developing 310 bhp @ 4600 rpm.			
(2) Distance between top of float and machined surface of bowl cover.			
(3) Distance between bottom of float and bowl cover gasket, bowl cover assembly inverted.			
(4) 2.87, 3.07, 3.31, 3.54 and 4.1 ratio optional with Ultramatic transmission.			
(5) 3-1/4 pints with conventional transmission, 4 pints total with overdrive.			
(6) 8.20 x 15 tires optional.			

PLYMOUTH

CAR MODEL	Plaza Savoy Belvedere	Plaza Savoy	Plaza Savoy Belvedere
ENGINE			
No. Cyl-Head Type	6-L	V-8-I	V-8-I
Bore and Stroke (in)	3.25 x 4.63	3.63 x 3.256	3.75 x 3.13
Displacement (cu in)	230	270	277
AMA Horsepower	25.4	42.5	45.0
Max Horsepower @ rpm	125 @ 3600 (1)	180 @ 4400	187 @ 4400 (2)
Max Torque, lb-ft @ rpm	200 @ 1600	260 @ 2400	265 @ 2400
Max bmep, lb/sq in	131.1	145.2	144.3
Compression Ratio	7.6	8.0	8.0
IGNITION			
Spark Plug—Factory Eqpt	AL AR 80	AL AR 52	AL AR 52
Alternate	AC R46, Champ J-11	AC R45S or Champ J-18Y	
Spark Plug Gap .....	.035"	.035"	.035"
Firing Order	1-5-3-6-2-4	1-8-4-3-6-5-7-2	
Distributor—Make and Model...	AL IAT 4101B	AL IBJ 4301A	AL IBJ 4301A
Breaker Gap .....	.020"	.017"	.017"
Cam Angle	39° ± 3°	29° to 32°	29° to 32°
Timing—Crankshaft Degrees ...	2° BTC	4° BTC	4° BTC
Adv Deg—Centrif—Vac	16-16	30-25	30-25
Adv Begins—Ends—Eng rpm ...	800-2700	700-4300	700-4300
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int 1.53" Sil 1 Exh 1.41", XCR	1.72" Sil F 1.47", XCR	1.84" Sil F 1.56", XCR
Tappet Ctr—Seat Angle.....	Int .010" H, 45° Exh .010" H, 45°	Hyd Lifters, 45° Hyd Lifters, 45°	.012" H, 45° .012" H, 45°
Exhaust Seat Inserts	Yes	None	None
CARBURETOR			
Make, Model	Car BHS 2293S	Car BBD 2259SB	Car BBD 2407S
Type	Sgl DD	Dual DD	Dual DD
Float Level	7/32" (3)	7/32" (3)	7/32" (3)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 3.73	Std, 3.73	Std, 3.73
Overdrive, Axle Ratio	Opt, 4.1	Opt, 4.1	Opt, 4.1
Automatic, Axle Ratio	Opt, 3.73	Opt, 3.54	Opt, 3.54
Make Automatic (see page 30) ..	PowerFlite	PowerFlite	PowerFlite
CAPACITY			
Oil (Refill)	(qt) 5	5	5
Water (includes heater)....	(qt) 14	20	21
Transmission	(pt) 2-3/4 (4)	2-3/4 (4)	2-3/4 (4)
Rear Axle	(pt) 3-1/4	3-1/4	3-1/4
Gasoline	(gal) 17	17	17
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 115	115	115
Over All Lgth Incl Bumpers (in)	204.8	204.8	204.8
Shipping Weight	(lb) 3160	3295	3295
Tire Size—Recm Press.....	(lb) 6.70 x 15-24-24 or 7.10 x 15-24-24 optional		

- LOCATION CHASSIS SERIAL NO.** Left Front Door Body Hinge Post
- (1) With special power package consisting of dual DD Stromberg WW3-124 carburetor 131 bhp @ 3600 rpm.
 - (2) With special power package consisting of 4-barrel Carter WCFB 2302S carburetor, dual exhaust and special distributor 200 bhp @ 4400 rpm, 272 lb ft @ 2400.
 - (3) From top of float bowl without gasket to top of float.
 - (4) 3/4 pint additional with overdrive. PowerFlite requires 20 pints.

PONTIAC		Chieftain	Star Chief
CAR MODEL		56-27	56-28
ENGINE			
No. Cyl-Head Type	V-8-I	V-8-I	
Bore and Stroke (in)	3.94 x 3.25	3.94 x 3.25	
Displacement (cu in)	316.6	316.6	
AMA Horsepower	49.6	49.6	
Max Horsepower @ rpm	205 @ 4800 (1) (2)	227 @ 4800 (1)	
Max Torque, lb-ft @ rpm	294 @ 2600 (1) (2)	312 @ 3000 (1)	
Max bmep, lb/sq in	140.0	148.6	
Compression Ratio	8.9 (1)	8.9 (1)	
IGNITION			
Spark Plug—Factory Eqpt	AC 44	AC 44	
Alternate	Champion J-8, AL A5 or AR-5	Champion J-8, AL A5 or AR-5	
Spark Plug Gap .....	.033" to .038"	.033" to .038"
Firing Order	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2	
Distributor—Make and Model...	DR 1110862	DR 1110862	
Breaker Gap .....	.016"	.016"
Cam Angle	26° to 33°	26° to 33°	
Timing—Crankshaft Degrees ..	5° BTC	5° BTC	
Adv Deg—Centrif—Vac	20-16	20-16	
Adv Begins—Ends—Eng rpm ...	800-3600	800-3600	
Battery—Volts, Terminal Ground	12, Negative	12, Negative	
VALVES			
Size and Material	Int 1.78", GM 8440 Aluminum Treated	Int 1.78", GM 8440 Aluminum Treated	
Exh 1.50", MXCR Aluminum Treated		Exh 1.50", MXCR Aluminum Treated	
Tappet Clr—Seat Angle.....	Int Hydraulic Lifters, 30°	Int Hydraulic Lifters, 30°	
Exh Hydraulic Lifters, 45°		Exh Hydraulic Lifters, 45°	
Exhaust Seat Inserts	None	None	
CARBURETOR			
Make, Model	RP 7008695	Car WCFB 2364S or RP 7008697	
Type	Dual DD	DD 4 Barrel	
Float Level	1-15/64" (3)	(4)	
Choke Control	Automatic	Automatic	
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 3.64	Std, 3.64	
Overdrive, Axle Ratio			
Automatic, Axle Ratio	Opt, 3.08	Opt, 3.23	
Make Automatic (see page 30) ..	Hydra-Matic	Hydra-Matic	
CAPACITY			
Oil (Refill)	(qt) 5	5	
Water (includes heater).....	(qt) 24.3	24.3	
Transmission	(pt) 19.0 (5)	18.7 (5)	
Rear Axle	(pt) 3-1/4	3-1/4	
Gasoline	(gal) 20	20	
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 122.0	124.0	
Over All Lgth Incl Bumpers (in)	205.6	219.6	
Shipping Weight	(lb) 3496 (6)	3561 (6)	
Tire Size—Recm Press.....	(lb) 7.10 x 15-24-24 7.60 x 15-22-20 Optional		
LOCATION CHASSIS SERIAL NO.		Left Front Pillar Post	
(1) Power data is given for 8.9 compression ratio engine which is equipped with Hydra-Matic transmission. An optional compression ratio of 7.9 is available with synchromesh transmission.			
(2) 227 bhp @ 4800 rpm, 312 lb ft @ 2600 rpm when equipped with optional four-barrel carburetor.			
(3) From bottom of float to bowl cover gasket with bowl cover assembly inverted.			
(4) Carter WCFB; 3/16" between float and machined surface of bowl cover casting with bowl cover assembly inverted. Rochester: 1 19/32" between bottom of float and bowl cover gasket.			
(5) With Hydra-Matic. Conventional transmission requires 2 1/2 pints			
(6) Approximately 110 pounds additional with Hydra-Matic transmission			

Brief Passenger Car Data for 1956

January 1, 1956

RAMBLER & METROPOLITAN

CAR MODEL	Rambler	Metropolitan
ENGINE		
No. Cyl-Head Type	6-1	4-I
Bore and Stroke (in)	3-1/8 x 4-1/4	2-37/64 x 3-1/2
Displacement (cu in)	195.6	73.2
AMA Horsepower	23.44	10.63
Max Horsepower @ rpm	120 @ 4200	42 @ 4500
Max Torque, lb-ft @ rpm	170 @ 1600	62 @ 2400
Max bmep, lb/sq in	131	128
Compression Ratio	7.44	7.2
IGNITION		
Spark Plug—Factory Eqpt	AL AL7J	Champ N8B
Alternate	AC 45L, Champ H-10	AC 45XL, AL AG5
Spark Plug Gap .....	.030"	.024"
Firing Order	1-5-3-6-2-4	1-3-4-2
Distributor—Make and Model	Delco-Remy 1110242	Lucas DM-2
Breaker Gap .....	.016"	.015"
Cam Angle	28° to 35°	60° ± 3°
Timing—Crankshaft Degrees ...	TDC	11° BTC
Adv Deg—Centrif—Vac	32-8-1/2	14-24
Adv Begins—Ends—Eng rpm ...	650-3200	1200-3400
Battery—Volts, Terminal Ground	12, Negative	12, Positive
VALVES		
Size and Material	Int 1-19/32", Sil 1	1-3/8", Sil 1
Exh 1-11/32", 2112		1-3/16", XB
Tappet Clr—Seat Angle	Int .012" H or C, 45°	.015" C, 45°
Exh .016" H or C, 45°		.015" C, 45°
Exhaust Seat Inserts	None	None
CARBURETOR		
Make, Model	Car AS-2349S	Zenith 30-VIG-10
Type	Sgl DD	Sgl DD
Float Level	1/2"	NA
Choke Control	Automatic	Manual
TRANSMISSION AND AXLE		
Conventional, Axle Ratio	Std, 3.77 (1)	Std, 4.56
Overdrive, Axle Ratio	Opt, 4.4 (1)	
Automatic, Axle Ratio	Opt, 3.58 or 3.3	
Make Automatic (see page 30) ..	Hydra-Matic	None
CAPACITY		
Oil (Refill)	(qt) 4	4
Water (Includes heater)	(qt) 12	8
Transmission	(pt) 2-1/4 (2)	5-1/2
Rear Axle	(pt) 3	2
Gasoline	(gal) 20	10-1/2
GENERAL DATA (Four-Door Sedan)		
Wheelbase	(in) 108	85
Over All Lgth Incl Bumpers (in)	191.1 (3)	149-1/2
Shipping Weight	(lb) 2891	1835 (convertible)
Tire Size—Recm Press	(lb) 6.40 x 15-24-24	5.20 x 13-24-22
LOCATION CHASSIS SERIAL NO.		
	Under Hood on Dash Panel	

(1) 4.4 ratio optional with conventional transmission and 4.1 optional with overdrive.

(2) 3 1/2 pints total with overdrive. 17 pints refill with Hydra-Matic.

(3) Add 7 3/4" to overall length when equipped with optional continental tire.

STUDEBAKER

CAR MODEL	Champion 56G	Commander 56B	President 56H
ENGINE			
No. Cyl-Head Type	6-L	V-8-I	V-8-I
Bore and Stroke (in)	3 x 4-3/8	3-9/16 x 3-1/4	3-9/16 x 3-5/8
Displacement (cu in)	185.6	259.2	289
AMA Horsepower	21.6	40.6	40.6
Max Horsepower @ rpm	101 @ 4000	170 @ 4500 (1)	195 @ 4500 (2)
Max Torque, lb-ft @ rpm	152 @ 1800	260 @ 2800 (1)	286 @ 2800 (2)
Max bmep, lb/sq in	123.6	151.3	149.2
Compression Ratio	7.8	7.8 (3)	7.8 (3)
IGNITION			
Spark Plug—Factory Eqpt	Champ J-7	Champ H-11	Champ H-11
Alternate	AC 44, AL A7	AC 45L, AL AL7 or ARL8	
Spark Plug Gap .....	.030"	.035"	.035"
Firing Order	1-5-3-6-2-4		1-8-4-3-6-5-7-2
Distributor—Make and Model	AL IAT-4201		DR-1110864
Breaker Gap .....	.020"		.013" to .018"
Cam Angle	38° to 40°		28° to 34°
Timing—Crankshaft Degrees ...	2° BTC	4° BTC	4° BTC
Adv Deg—Centrif—Vac	14-18	24-16	24-16
Adv Begins—Ends—Eng rpm ...	800-2800	600-2250	600-2250
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
VALVES			
Size and Material	Int 1-11/32", CNS Exh 1-9/32", 2112	1-21/32", SAE 8045 1-17/32", 2112N	
Tappet Ctr—Seat Angle	Int .016" C, 45° Exh .016" C, 45°	.026" C or .024" H, 45° .026" C or .024" H, 45°	
Exhaust Seat Inserts	None	None	None
CARBURETOR			
Make, Model	Car We 2108S	StromWW6-117	StromWW6-117
Type	Sgl DD	Dual DD	Dual DD
Float Level	3/8" (4)	(5)	(5)
Choke Control	Automatic	Automatic	Automatic
TRANSMISSION AND AXLE			
Conventional, Axle Ratio	Std, 4.1	Std, 3.54	Std, 3.54
Overdrive, Axle Ratio	Opt, 4.56	Opt, 3.92	Opt, 3.92
Automatic, Axle Ratio	Opt, 3.54	Opt, 3.31	Opt, 3.31
Make Automatic (see page 30) ..	Flightomatic	Flightomatic	Flightomatic
CAPACITY			
Oil (Refill)	(qt) 5	5	5
Water (includes heater)	(qt) 12-1/2	18-1/2	18-1/2
Transmission	(pt) 1.6 (6)	2.4 (6)	2.4 (6)
Rear Axle	(pt) 2.5	3.0	3.0
Gasoline	(gal) 18	18	18
GENERAL DATA (Four-Door Sedan)			
Wheelbase	(in) 116-1/2 (7)	116-1/2 (7)	116-1/2 (7)
Over All Lgth Incl Bumpers (in)	200-3/4 (8)	200-3/4 (8)	200-3/4 (8)
Shipping Weight	(lb) 2834	3139	3209
Tire Size—Recm Press	(lb) 6.40 x 15-26-24	6.70x15-26-22	6.70x15-26-24
LOCATION CHASSIS SERIAL NO.			
	Left Front Door Hinge Pillar Post		

- 185 bhp @ 4500 rpm, 265 lb ft @ 2800 rpm with four barrel carburetor and dual exhaust system.
- 210 bhp @ 4500 rpm, 292 lb ft @ 2800 rpm standard on Classic and Skyhawk models and optional on others. A 352 cu in, 9.5 CR, 275 bhp @ 4600 rpm, 380 lb ft @ 2800 rpm engine is used in Goldenhawk models.
- 8.3 compression ratio optional.
- Between boss on bowl cover and far edge of float seam.
- Use float level gage J5475.
- 2.75 with overdrive on Champion, 3.4 with overdrive on Commander and President. Flightomatic requires 18 pints.
- Classic four door sedan and all coupes 120-1/2".
- 203-15/16" overall length of coupes. Classic 204-3/4".

APPROXIMATE ANALYSIS OF VALVE, VALVE FACING AND SEAT INSERT MATERIALS IN GENERAL USE

ELEMENT	EXHAUST VALVE STEELS										INTAKE VALVE STEELS									
	SIL 1	SIL XB	XCR	XCR MOD	2112 ²	SIL 10	SIL X-142 ³ (17PA)	FORD CAST	B-312	EL-44H	2158	SIL F	SAC	SAC	SAC	SAC	SAC	SAC	SAC	SAC
CHROMIUM (CR)	8.5	21.0	2.37	23.9	21.0	19.0	14.0	15.0	19.7	21.0	21.0	2.9	0.7	1.1	1.0	0.3	0.4	0.4	0.4	0.4
NICKEL (NI)	—	1.5	4.7	3.7	12.0	8.0	14.0	15.0	2.2	3.7	5.0	—	1.3	—	—	—	0.6	0.5	0.5	0.5
CARBON (C)	0.45	0.75	0.45	0.38	0.25	0.38	0.45	1.00	0.60	0.80	0.20	0.40	0.40	0.48	0.50	0.46	0.43	0.43	0.43	0.43
SILICON (SI)	3.2	2.0	1.0 MAX	0.8	0.8	2.8	0.6	3.5	0.5 MAX	0.2 MAX	0.4	4.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
MANGANESE (MN)	—	0.4	1.0 MAX	3.7	1.4	1.0	0.7	0.8	5.0	9.0	5.5	0.4	0.8	0.9	0.8	0.9	1.2	1.2	1.2	1.2
MOLYBDENUM (MO)	—	—	2.7	1.5	—	—	0.5 MAX	0.4	—	—	—	—	—	—	—	—	0.2	0.1	0.1	0.1
TUNGSTEN (W)	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—
OTHER	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IRON (FE)	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL

ELEMENT	FACING MATERIALS										SEAT INSERT MATERIALS									
	STELLITE	STELLITE	4.	EATONITE	X-782	NICHROME	STELLITE	4.	EATONITE	CHROMIUM	MOLY	SPARTA	SAC	SIL XB	VSM	STELLITE	SAC	SIL XB	VSM	STELLITE
CHROMIUM (CR)	27.0	24.0	29.0	26.0	20.0	—	27.0	29.0	3.0	3.0	3.0	3.2	3.5	21.0	3.0	—	—	—	—	—
NICKEL (NI)	—	24.0	39.0	39.0	39.0	—	12.5	39.0	39.0	—	—	—	—	15	—	—	—	—	—	—
CARBON (C)	12.5	1.60	2.40	2.00	0.30	—	2.7	10 MAX	18	2.20	2.20	1.00	0.35	0.75	0.65	—	—	—	—	—
SILICON (SI)	2.7	1.3	1.0 MAX	0.4	0.3 MAX	—	—	—	0.6	0.6	0.6	0.4	0.2	2.0	1.0	—	—	—	—	—
MANGANESE (MN)	—	0.3	—	0.5 MAX	0.8	—	—	—	—	—	—	—	—	0.4	0.6	—	—	—	—	—
MOLYBDENUM (MO)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TUNGSTEN (W)	4.0	12.5	15.0	9.0	—	—	4.0	15.0	—	—	—	—	14.0	—	—	—	—	—	—	—
COPPER (CU)	—	—	—	—	—	—	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—
OTHER	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IRON (FE)	2.0	0.7	9.0 MAX	4.0 MAX	1.0 MAX	—	2.0	9.0 MAX	—	—	—	—	—	—	—	—	—	—	—	—

- NOTES: 1. FERRITIC OR MARTENSITIC (MAGNETIC)
2. SIGMA PHASE (SLIGHTLY MAGNETIC)
3. AUSTENITIC (NON MAGNETIC)
4. NON FERROUS ALLOY (NON MAGNETIC)
5. CAST IRON (MAGNETIC)
6. 2112N HAS SAME COMPOSITION WITH Q10 TO Q20% NITROGEN
7. 2112N HAS SAME COMPOSITION WITH PREFIX "N" INSTEAD OF "SAC"

ETHYL CORPORATION

SPARK PLUG HEAT

		← HOTTER →					
AC	14 mm	18 48X	47L*	46-5 46X 46 R46 46XL**	45XL** 45XLR**	45 R45S 45R 45L*	44-5
	10 mm	M-8			106		
	18 mm	89*			85	85T*** 85TR***	
	7/8"	78 78S*			76 76S		
CHAM- PION	14 mm	J-11	J-12 H-12*	J-11 H-11*		J-8 H-10* N-18**	
	10 mm	Y-8			Y-6		
	18 mm	10 Com-64*	9		870*** 8 Com	7	
	7/8"	3 Com*	2 Com L		2)		
AUTO- LITE	14 mm	A11 AL11*	AR10 AT10	A9 AL9* 4GS123**	AR50 AR4 ARL8* AR92	A7 AL7* AG7** 4GS150**	
	10 mm			P6 PR6			
	18 mm		BT10 BR10		BT8 BR8	BF7*** BRF8***	
	7/8"		TT10		TT8		


***Special Plug - 1955 and 1956 Ford, Mercury, Lincoln

60° Seat Angle-No Gasket Used

** 3/4" Reach Plug

* 7/16" Reach Plug

RANGE COMPARISONS

							
44 R44XLS**	43L*	43-E	43 R43	42	14 mm	AC	
104					10 mm		
	84T***				18 mm		
74					7/8"		
J-7 H-9*	N-3B**	J-6	J-5 NA-8**	J-2 NA-10**	14 mm	CHAM- PION	
	Y-4-A				10 mm		
6 Com	360***		5 Com	4 Com	18 mm		
C-4	1 Com		0 Com		7/8"		
AT6	AR51 AR5 AR52 AGR51**	A5 AL5* AUG** AGR52**	AR41 AT4 AGR41** AGR42**	A3 AG3** AGR31** AGR32**	14 mm	AUTO- LITE	
		P4 PR4			10 mm		
BT6	BT6***	BT4 BR4	BT3		18 mm		
		TT4			7/8"		

AUTOMATIC AND SEMI-AUTOMATIC TRANSMISSIONS

Dynaflow (Buick)

The Dynaflow transmission consists of a five-element torque converter and a multiple pinion planetary gearset providing low and reverse ratios. The two turbine elements of the converter are interconnected through a planetary gearset of 1.6:1 ratio. The stator vanes are pivoted in the vane carrier and their pitch is controlled by a hydraulic piston in response to accelerator position. The maximum torque multiplication of the converter is 3.5 in the high stator pitch and 3.1 in the low pitch position. No additional gearing, other than the internal gearing between the turbines, is used for normal forward driving. The drive is always through the converter. Low range 1.82:1 gear ratio can be manually engaged at any throttle position for extra pulling power and engine braking.

Flightomatic (Studebaker Corporation)

This transmission is composed of a three-element torque converter and a multiple pinion compound planetary gearset to produce three forward speeds and reverse. The drive is always through the converter which has a maximum torque multiplication of 2.15:1. Normal drive starts through the torque converter and low gear ratio (2.40:1), shifts to torque converter plus intermediate ratio (1.47:1) and then shifts to converter only. The shifts are automatic and vary with car speed and accelerator position. The transmission can be manually locked in low range for added pulling power and engine braking.

Fordomatic, Merc-O-Matic and Turbo-Drive (Ford, Mercury, Lincoln and Continental)

This transmission is composed of a three-element torque converter and a multiple pinion planetary gear system to produce three forward speeds and reverse. The drive is always through the converter which has a maximum torque multiplication of 2.1:1. Normal drive starts through the torque converter and intermediate gear ratio (1.47:1) and automatically shifts to converter only, depending on throttle opening and car speed. Low gear (2.40:1 gear ratio) can be engaged for added acceleration from a standstill or from low vehicle speeds by depressing the accelerator to the floor. The transmission may be manually locked in low range for added pulling power or engine braking.

Hydra-Matic (Detroit Transmission Division GMC)

Available on Hudson, Nash, Oldsmobile and Pontiac. This transmission consists of a fluid coupling with three planetary gearsets providing four forward speeds and reverse. The shifts are automatic and vary with car speed and accelerator position. Ratios are as follows: first, 3.82:1; second, 2.63:1; third, 1.45:1; fourth, 1:1, for all cars except Pontiac. Pontiac ratios are as follows: first, 4.08:1; second, 2.63:1; third, 1.55:1; fourth, 1:1.

Controlled Coupling, Jetaway and Strato-Flight Hydra-Matic

Available on Cadillac, Oldsmobile and Pontiac. This transmission consists of two fluid couplings and three planetary gearsets providing four forward speeds and reverse. The large fluid coupling is used for the transmission of power as in the original Hydra-Matic. The small fluid coupling replaces the clutch unit in the forward planetary gearset and the front and rear bands have been replaced by sprag type clutches. The shifts are automatic and vary with car speed and accelerator position. Ratios are as follows: first, 3.97:1; second, 2.55:1; third, 1.55:1; fourth, 1:1.

Overdrive (Borg Warner Corporation)

Available on Chevrolet, DeSoto, Dodge, Ford, Hudson, Mercury, Nash, Packard, Plymouth and Studebaker. It consists of a planetary gearset and one-way clutch used behind a conventional three-speed transmission. The shift is controlled electrically according to car speed and is actuated by the accelerator. The driving ratio reduction is approximately 30%.

PowerFlite (Chrysler Corporation)

This transmission is used on Imperial, Chrysler, DeSoto, Dodge and Plymouth in both V-8 and six-cylinder cars. It consists of a four-element torque converter and two planetary gearsets providing low and reverse ratios. The drive is always through the converter which has a maximum torque multiplication of 2.7:1. Normal drive starts through the torque converter and low gear ratio (1.72:1) and automatically shifts to converter only, depending on throttle opening and car speed. The transmission can be manually locked in low range for extra pulling power and engine braking.

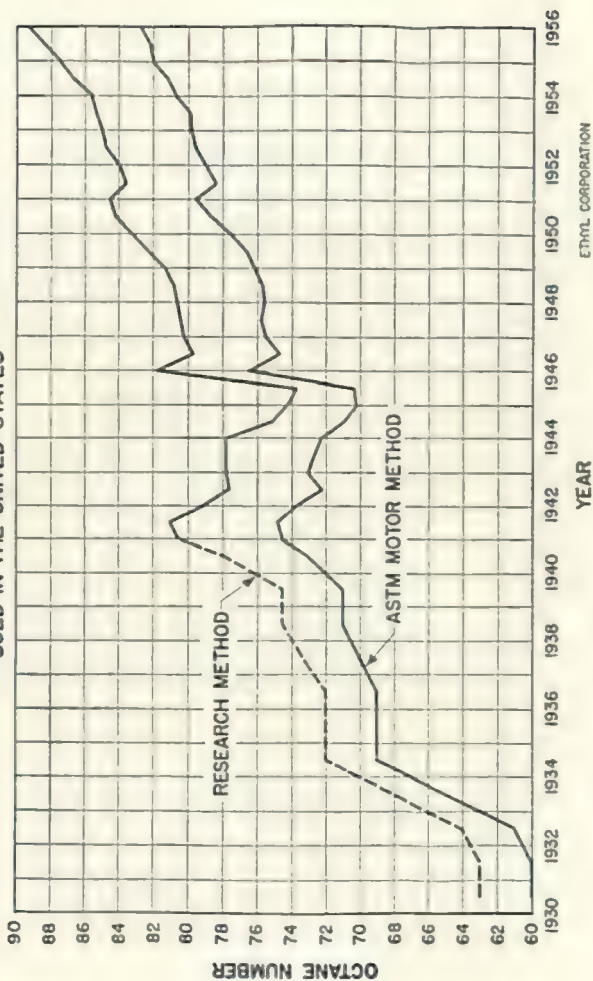
Powerglide (Chevrolet)

This transmission consists of a three-element torque converter with a multiple pinion planetary gearset providing low and reverse ratios. The drive is always through the converter which has a maximum torque multiplication of 2.1:1. Normal drive starts through the torque converter and low gear ratio (1.82:1) and automatically shifts to converter only, depending on throttle opening and car speed. The transmission can be manually locked in low range for extra pulling power and engine braking.

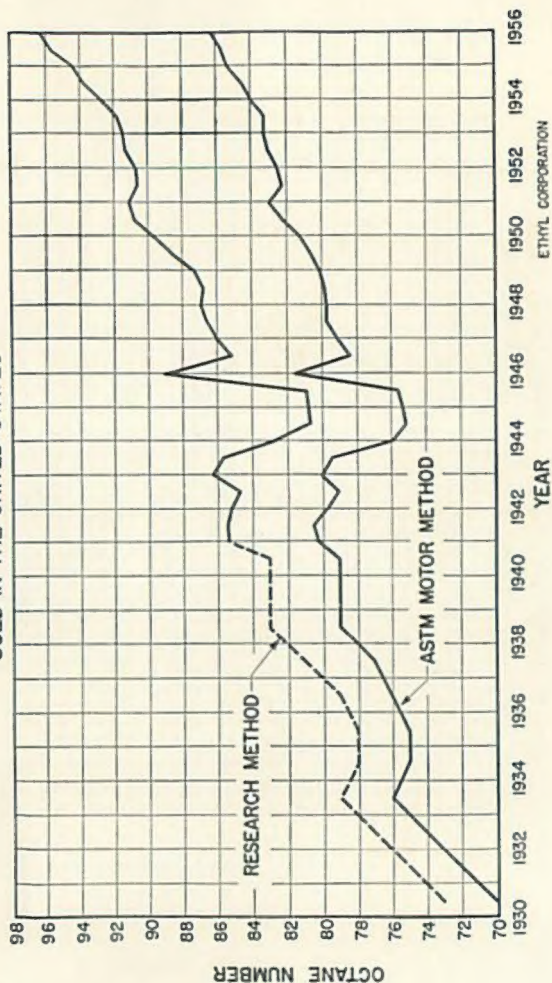
Ultramatic (Packard, Nash V-8, Hudson V-8 and Studebaker Goldenhawk)

This transmission is composed of a four-element torque converter (one pump, two turbine members and a stator), a multiple pinion planetary transmission to provide low and reverse, and a direct drive clutch. The maximum torque multiplication of the converter is 3.25:1 and it is used only for accelerating. Normal drive with the selector in the Drive position starts through the torque converter and low gear ratio (1.82:1), automatically shifts to torque converter only and then the pump and turbine are locked together by the direct drive clutch into a solid direct drive. With the selector in the High position the transmission starts through the converter only and then locks-up into direct drive. The shift from low to direct and the clutch lock-up is controlled automatically by the car speed and accelerator position. Low range can be manually engaged for extra power or engine braking.

TREND IN ANTIKNOCK QUALITY OF REGULAR GASOLINES SOLD IN THE UNITED STATES



TREND IN ANTIKNOCK QUALITY OF PREMIUM GASOLINES SOLD IN THE UNITED STATES



TRENDS OF AMERICAN PASSENGER CAR ENGINE DESIGN SINCE 1925

AVERAGES OF VALUES LISTED IN TRADE PUBLICATIONS

